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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,609	02/20/2004	David Voeller	HE 8571 U1	1618
1688	7590	06/20/2006	EXAMINER	
POLSTER, LIEDER, WOODRUFF & LUCCHESI 12412 POWERSCOURT DRIVE SUITE 200 ST. LOUIS, MO 63131-3615			RATCLIFFE, LUKE D	
			ART UNIT	PAPER NUMBER
			3662	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/783,609	Applicant(s) VOELLER ET AL.	
	Examiner Luke D. Ratcliffe	Art Unit 3662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) 3,15,25,27 and 31-35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-14,16-24,26,28-30 and 36-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 6-8, 14, 16, 19, 21, 23, 28-30, 36-39, 41-44, are rejected under 35 U.S.C. 102(b) as being anticipated by Jones (6069966).

Referring to **claims 1, 36, and 44**, Jones shows a vehicle wheel system including an imaging sensor (column 7 line 40-50), wherein the central processing unit is configured to receive at least the distance information from the image sensor to facilitate one or more vehicle wheel service procedures (column 3 line 30-55).

Referring to **claim 2**, Jones shows a vehicle wheel service system wherein the system is a wheel balancing system (column 1 line 6-23).

Referring to **claims 6 and 52**, Jones shows a vehicle wheel service system wherein the image sensor is further configured to acquire distance information associated with each of one or more acquired optical images. It is inherent that a camera takes multiple images and that the processing would be done on all these images.

Referring to **claim 7**, Jones discloses a vehicle wheel service system wherein the central processing unit is further configured to utilize the distance information to identify a surface profile of a vehicle wheel rim (column 1 through column 2).

Referring to **claim 8**, Jones shows a vehicle wheel service system wherein the central processing unit is further configured to utilize the distance information to calculate one or more parameters of the vehicle wheel assembly (column 2 line 10-35).

Referring to **claim 14**, Jones shows a vehicle wheel service system wherein the central processing system unit is further configured to utilize the distance information to identify a miss-centering of the vehicle wheel rim on the rotation support structure (column 1 line 6-23).

Referring to **claim 16**, Jones shows a vehicle wheel service system wherein the central processing unit is further configured to utilize the distance information to identify one or more features of the vehicle wheel assembly (column 2).

Referring to **claim 19**, Jones shows a vehicle wheel service system wherein the one or more figures includes a wheel rim edge profile (column 2).

Referring to **claim 21**, Jones shows a vehicle wheel service system wherein the one or more features includes a tire defect (column 2 line 10-55).

Referring to **claim 23**, Jones shows a vehicle wheel service system wherein the one or more features includes an installed imbalance correction weight.

Referring to **claim 28**, Jones shows a vehicle wheel service system wherein the image sensor assembly is configured for movement to later a field of view associated with the image sensor assembly (paragraph 6-20).

Referring to **claim 29**, Jones shows a vehicle wheel service system wherein the image sensor assembly is remotely disposed from the rotation support structure (figure 2).

Referring to **claim 30**, Jones shows a vehicle wheel service system wherein the central processing unit is further configured to utilize said distance information to alter a configuration of one or more components of the improved vehicle wheel service system (columns 2-4).

Referring to **claims 37-39 and 41-43**, Jones shows data that identifies a feature location, dimension, and configuration of the feature on the mounted wheel (columns 2 and 3).

Referring to **claim 51**, Jones shows identified features include tire surface markings (column 2 line 10-55).

Referring to claim

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

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applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 46-49 are rejected under 35 U.S.C. 102(e) as being anticipated by Voeller (6822582).

Referring to **claims 46-49**, Voeller shows a method for selecting imbalance correction weight parameters comprising positioning within the field of view a desired location on the wheel rim for placement of a correction weight, acquiring an image, and using the image to select an imbalance correction mode (column 10 line 28-column 11). In this passage Voeller discloses a RFID tag system that will do the same as a camera system however he discloses that a camera can be used in place of the RFID tag system which would inherently then go through the steps disclosed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 24, 50, and 53-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones (6069966).

Referring to **claim 24**, Jones discloses systems that measure both the wheel rim and the tire together, Jones also discloses measuring the surface defects of the tire (column 2 lines 55- column 3). It would be obvious with the disclosure of Jones to measure the surface defects of the wheel or the tire because they are shown by the systems disclosed in the art described by Jones to be measured together.

Referring to **claims 50 and 53**, it would be obvious to measure the distance of each pixle element and utilize the acquired distance information to identify the distance measurement because this is a common way to determine distance when an array of pixels are taken and adds no new or unexpected results.

Referring to **claims 54 and 55**, it would be obvious to use the distance information to identify the presence of anything associated with a tire or wheel assembly and the listing of individual tire or wheel assembly accessories does not contain any new or interesting results.

Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jones (6069966) in view of Downing (5054918).

Jones shows a vehicle wheel system including an imaging sensor (column 7 line 40-50), wherein the central processing unit is configured to receive at least the distance information from the image sensor to facilitate one or more vehicle wheel service procedures (column 3 line 30-55). However Jones does not show selecting imbalance correction weight parameters.

Downing shows a method for selecting imbalance correction weight parameters in a vehicle wheel balancing system providing, within the field of view of the imaging sensor assembly, and indicator at a location on a vehicle wheel rim of the vehicle wheel assembly at which at least one imbalance correction weight is to be placed (column 3 lines 10-50), acquiring at least one image of the indicator (figures 4 and 5), identifying the location on the wheel rim from the position of the indicator within at least one image (column 3 lines 10-50), and calculating one or more imbalance correction weight parameters corresponding to at least one imbalance correction weight (column 3 and 4). IT would have been obvious to modify Jones to include the selecting imbalance correction weight parameters in a vehicle because Jones already detects the imbalance of a wheel and it is common to then continue with the step of selecting imbalance correction weight parameters, this addition adds no new or unexpected results.

Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones (6069966) in view of January (4336658).

Referring to claims 9 and 10, Jones shows a vehicle wheel system including an imaging sensor (column 7 line 40-50), wherein the central processing unit is configured to receive at least the distance information from the image sensor to facilitate one or more vehicle wheel service procedures (column 3 line 30-55).

Jones however does not show those parameters to be tire bead seat surfaces of the vehicle wheel rim and lateral runout of the vehicle wheel rim.

January shows a targeting structure for use with an alignment apparatus that can determine tire bead seat surfaces of the vehicle wheel rim and lateral runout of the vehicle wheel rim (column 8 lines 45-65). It would have been obvious to modify Jones to include the alignment parameters discussed in January because these are common alignment parameters to be used in a vehicle wheel service system and bring no new or unexpected results.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jones (6069966) in view of Amiguet (6173213).

Referring to claim 17, Jones shows a vehicle wheel system including an imaging sensor (column 7 line 40-50), wherein the central processing unit is configured to receive at least the distance information from the image sensor to facilitate one or more vehicle wheel service procedures (column 3 line 30-55). However Jones does not show features to be spoke configuration or spoke profiles.

Amiguet shows features to be spoke configuration or spoke profiles (column 13 line 48 – column 14). It would have been obvious to modify Jones to include features to be spoke configuration or spoke profiles because these features are necessary when determining the balance of a wheel.

Claims 20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones (6069966) in view of Downing (5054918).

Referring to claims 20 and 22, Jones shows a vehicle wheel system including an imaging sensor (column 7 line 40-50), wherein the central processing unit is configured to receive at least the distance information from the image sensor to facilitate

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one or more vehicle wheel service procedures (column 3 line 30-55). However Jones does not show features to be valve stem location and tire tread depth.

Downing shows features to be valve stem location (column 6 lines 12 –33) and tire tread depth (column 5 lines 2-25). It would have been obvious to modify Jones to include features taught by Downing being valve stem location and tire tread depth because these features are necessary when determining the balance of a wheel.

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jones (6069966) in view of Carter (20020000121).

Referring to **claim 25**, Jones shows a vehicle wheel system including an imaging sensor (column 7 line 40-50), wherein the central processing unit is configured to receive at least the distance information from the image sensor to facilitate one or more vehicle wheel service procedures (column 3 line 30-55).

Jones however doesn't specifically show where to place one or more correction weights.

Carter does show where to place one or more correction weights (paragraph 4). It would have been obvious to modify Jones to include the ability to show the placement of the correction weights as taught by Carter because this is a common feature of a wheel balance system.

Response to Arguments

Applicant's arguments with respect to all applicable claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luke D. Ratcliffe whose telephone number is 571-272-3110. The examiner can normally be reached on 8:00-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on 571-272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LDR

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